

*Circulation
Element*

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I. INTRODUCTION

A. BACKGROUND AND INTENT

The Circulation Element for the City of Carlsbad is a comprehensive plan for the circulation of people, goods, energy, water, sewage, storm waters, communications, and services. The primary focus of the document is to provide for the safe and efficient movement of people and goods within the City and to provide for public access to all existing and future land uses identified in the Land Use Element of the General Plan. It also identifies how transportation systems will link with surrounding jurisdictions and be coordinated with regional transportation plans.

To ensure that circulation facilities are provided concurrent with their need, the City has adopted numerous policies, programs and ordinances, including the Growth Management Program. In addition, new regulations have mandated compliance with the requirements of the California Clean Air Act and Federal Clean Water Acts. These new state and federal regulations require implementation of both a Transportation Demand Management Program and Storm Water Quality Management Program, respectively. The Circulation Element incorporates policies and action plans to implement these new requirements together with requirements of the Growth Management Program.

The City contains many scenic and historical areas traversed by existing and proposed roadways. From an aesthetic, environmental and historical perspective, it is important to preserve as much of the natural qualities of these areas as possible in order to maintain the distinctive character of the City. In previous versions of the General Plan, the City maintained a separate Scenic Roadways Element to accomplish the task of preserving and enhancing the scenic quality of the City. Changes to State law in 1981 eliminated the mandatory inclusion of a Scenic Roadways Element within the General Plan. In an effort to reduce the number and complexity of elements within the City's General Plan, the goals, objectives, policies and action plans necessary to preserve the scenic quality of roadways within the City have been retained, but have been incorporated into the Circulation Element.

The Circulation Element includes several maps and graphics. Street classifications used in Carlsbad, described according to their function and the amount of traffic they carry, are shown on Table 1: Street Classifications. The Circulation Plan is illustrated on Map 1. The Street Design Standards used by the City are shown on Figure 1. Bicycle Routes and High Pressure Gas and Petroleum Mains are shown on Map 2 and Map 3.

B. STATE LAW

A Circulation Element is required by State law (Government Code Section 65032(b)) and must consist of "the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the Land Use Element of the General Plan". The Circulation Element must state the overall goals, objectives and policies concerning the circulation needs of the City and specifically address issues relating to major thoroughfares, transportation routes, terminals and other local public utilities and facilities. The City of Carlsbad's Circulation Element also addresses issues of public transit, bicycle and pedestrian routes and facilities, railroads and light rail transit, air travel, parking, transportation demand management, and vehicular and pedestrian safety.

C. RELATIONSHIP TO OTHER ELEMENTS

The Circulation Element is most closely related to, and is a reflection of, the Land Use Element of the General Plan. The Circulation Plan was developed in conjunction with computerized traffic modeling and analysis utilizing the projected land uses contained in Carlsbad's Land Use Element as well as land use plans of surrounding communities. The most recent modeling effort for the City of Carlsbad was conducted in 1990 by the San Diego Association of Governments (SANDAG) using the TranPlan computer program. Results of the modeling effort indicate that the proposed Circulation Plan contained in this document will adequately serve the proposed land uses.

The comprehensive nature of the Circulation Element requires that it relate to and correlate with all other elements of the General Plan including the Noise, Housing, Open Space and Conservation, Parks and Recreation, and Public



Safety Elements. All these elements address various aspects of the circulation system and together they provide the basic policies and guidelines for the development of a safe, efficient and aesthetically pleasing transportation network. These elements should be referred to for more detailed discussion. For example, the public facilities discussed in the Circulation Element are also discussed in the Land Use Element. It is the policy of the City of Carlsbad that the Circulation Element be consistent with all other elements of the General Plan.

D. THE CITY OF CARLSBAD SETTING

The dominant natural and manmade features in Carlsbad, which establish the framework within which the circulation network must function, include the Pacific Ocean to the west, the three natural lagoons extending from the ocean to the interior of the City, the steep hills and canyons which punctuate the eastern half of the community, Highway 78 along the northern boundary, the Coast Highway, the AT&SF railroad and Interstate 5. These features all serve to separate the coastal portion of the City from the interior portion. There are three major, existing, arterial roads in the City, including, El Camino Real which runs north and south through the center of the City, Palomar Airport Road which runs east and west through the center of the City, and Rancho Santa Fe Road which runs along the southern and easterly boundary of the City. In addition, Carlsbad has a general aviation commuter airport located in the central portion of the City adjacent to the intersection of Palomar Airport Road and El Camino Real. Goals, objectives, and policies and programs related to air transportation are included in this element, but are also discussed in the Land Use Element.

Given the existing topographic constraints, the City has developed an integrated land use and circulation plan to take advantage of the natural landform features and the existing transportation facilities. A major challenge for the City in the future will be to complete the remaining roadway segments of the Circulation Element in a timely manner within a climate of increasingly strict environmental guidelines. The City must also find ways to refine the existing circulation network in the developed portions of the City to accommodate increased redevelopment activity and the development of surrounding communities. Finally, it is recognized that the City circula-

tion system is a part of the larger regional, state, and national transportation systems. As such, the City circulation system will continue to be influenced by the demands placed upon it by larger transportation system needs.

E. CAPITAL IMPROVEMENT PROGRAM

The construction of unbuilt circulation element roads and public utilities will be brought about through a combination of construction activities undertaken by the development community and the City of Carlsbad. The guiding theme for the construction of the circulation element infrastructure is the provision of facilities prior to or concurrent with the need for such facilities. To this end the City has established the Growth Management Program, the Capital Improvement Program and a development exaction program consisting of public facility impact fees and direct developer construction of public road, public trail and utility improvements.

The Growth Management Program establishes minimum standards for the provision of basic public infrastructure including circulation element roads, sewer collection, sewer treatment, water distribution and flood control. In addition, the Growth Management Program requires the preparation of Local Facilities Management Plans to ensure that the public facility standards are met through buildout for each of the 25 local facility zones.

For the most part, roads and public utilities will be constructed as a condition of development activity in accordance with the dictates of the Growth Management Program. Where a particular facility exceeds the financial capability of any one developer or the need for the facility cannot be attributed to a single development, the City, and various utility districts within the City, have established facility impact fees to generate the revenues needed to finance construction of those facilities. These impact fees combined with direct developer construction activities will assure completion of the majority of the circulation element network. The remaining portion of the network for which the need is not attributable to future development, must be financed through other local, regional and federal funding sources. An example of one such facility is the improvement of Carlsbad Village Drive west of Interstate 5 which



will be funded through redevelopment tax increment bonds.

Timing for the construction of the missing circulation element links is, for the most part, a function of development activity. For those facilities financed through facility impact fees or other funding sources, the City prepares on a yearly basis a Capital Improvement Program (CIP). The CIP establishes the next year's construction program and also outlines the five year and buildout

improvement needs for the City. The CIP must balance the availability of revenues with the various competing needs for public facility construction. Taken as a whole, the Capital Improvement Program, Growth Management Program and development exaction program will assure timely completion of the circulation element facilities as needed by the residents of Carlsbad and surrounding communities.

TABLE 1: STREET CLASSIFICATIONS

Local Streets:

- Provide street connectivity and immediate access to adjoining properties
- Are designed to discourage cut-through traffic
- Balance use of the right-of-way between vehicles and pedestrians
- Reduce vehicle speed and "cut-through" traffic through the use of appropriate street widths and traffic calming measures
- Provide access for emergency service providers and emergency egress for residents
- Carry low volumes of traffic (estimated average daily trips: 2,000 maximum)

Collector Streets:

- Provide immediate access to adjoining properties
- Serve as the connecting link for traffic between local and arterial streets
- Generally carry light to moderate traffic volumes (estimated average daily trips: 2,000 to 10,000)

Secondary Arterials:

- Provide limited access to adjacent properties
- Serve to move traffic between collector streets and larger arterials or the freeways
- Have two traffic lanes in each direction with a painted median
- Carry moderate traffic volumes (estimated average daily trips: 10,000 to 20,000)

Major Arterials:

- Prohibit access to adjacent properties unless no other alternative exists
- Provide intra-city circulation and connections to freeways and regional roads
- Have a minimum of two traffic lanes in each direction with a raised median
- Carry moderate to heavy traffic volumes (estimated average daily trips: 20,000 to 40,000)

Prime Arterials:

- Prohibit access to adjacent properties unless no other alternative exists
- Provide for regional and intra-city circulation and connections to freeways and other regional roads
- Carry very heavy traffic volumes (estimated average daily trips: 40,000 or more)



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II. GOALS, OBJECTIVES, AND IMPLEMENTING POLICIES AND ACTION PROGRAMS

STREETS AND TRAFFIC CONTROL

A. Goals

- A.1 A City with an integrated transportation network serving local and regional needs which accommodates a variety of different travel modes based on safety, convenience, attractiveness, costs, environmental and social impacts.
- A.2 A City with an adequate circulation infrastructure to serve the projected population.
- A.3 A City with a comprehensive network of streets that maximize access to all neighborhoods and land uses.
- A.4 A City with properly maintained, smooth functioning and safe traffic control systems.
- A.5 A City with inviting streetscapes that encourage walking and promote a sense of neighborhood in residential developments.
- A.6 A City with streets designed to balance vehicular requirements with the needs of all pedestrians including children, the elderly and the disabled.
- A.7 A City committed to providing a circulation system that promotes the safety and livability of residential neighborhoods while maintaining adequate access for emergency service providers and prompt evacuation capabilities for residents.
- A.8 A City with a circulation system that promotes alternative transportation such as walking, bicycling and public transportation.

B. Objectives

- B.1 To provide an adequate circulation infrastructure concurrent with or prior to the actual demand for such facilities.

- B.2 To design streets for the safe and efficient movement of people, goods and services in the most environmentally sound manner possible.
- B.3 To maintain a clear and consistent set of standards for the design and construction of roads and traffic control devices.
- B.4 To create a priority list for the construction of new traffic signals.
- B.5 To provide safe, adequate and attractively landscaped parking facilities.
- B.6 To implement and regularly update developer fee programs for financing of circulation facilities.
- B.7 To enhance the economic value of property and improve the economic competitiveness of the City through the construction of well-designed, efficient, and cost effective transportation facilities.
- B.8 To design new subdivisions with streets where trees, parkways and traffic calming measures beautify neighborhoods, slow vehicle speeds, maintain on-street parking and encourage residents to walk or bicycle.

C. Implementing Policies and Action Programs

- C.1 Require new development to comply with the adopted (September 23, 1986) Growth Management performance standards for circulation facilities.
- C.2 Establish a network of truck routes throughout the City to provide for the safe movement of trucks into and out of commercial zones while reducing conflicts with traffic in residential, school and recreational areas.
- C.3 Use the street design standards contained in this element (Figure 1: Street Design Standards) as guidelines for what is reasonable and desirable. Allow variations to occur in accordance with established City policy regarding engineering standards variances.
- C.4 Minimize the number of access points to major and prime arterials to enhance the



- functioning of these streets as throughways.
- C.5 Use good road design practice to minimize the number of intersections and other conflicting traffic movements.
- C.6 Use good road design practice to minimize noise on adjacent land uses.
- C.7 Provide traffic control devices along all roadway segments and at intersections.
- C.8 Provide for the safe movement of traffic and pedestrians around all road and utility construction projects.
- C.9 Pursue Transnet and other regional, state and federal funding sources to finance regional roads and transportation facilities.
- C.10 Provide greater flexibility in the design standards for hillside roads to minimize grading and visual impacts.
- C.11 Interconnect and synchronize the operation of traffic signals along arterial streets, whenever feasible.
- C.12 Prepare and maintain a Traffic Signal Qualification List to recommend priorities for the construction of new traffic signals.
- C.13 Establish and maintain an official street naming and addressing plan to remove conflicts, duplication, and uncertainty.
- C.14 Encourage joint public/private efforts to improve parking and circulation in developed areas.
- C.15 Encourage increased public parking in the Village and beach areas of the City.
- C.16 Require new development to construct all roadways needed to serve the proposed development prior to or concurrent with the circulation needs created by the development.
- C.17 Coordinate the planning and construction of new roads with existing roads in adjoining neighborhoods.
- C.18 Require new development to dedicate and improve all public rights-of-way for circulation facilities needed to serve development.
- C.19 Require new subdivisions to incorporate street designs, appropriate widths, traffic calming measures, and standards to reduce vehicle speeds and encourage bicycle use.
- C.20 Require new subdivisions to provide walkways linking homes with stores, schools, businesses and transportation corridors, etc.
- C.21 Require new subdivisions to incorporate parkways to encourage pedestrian activity.
- C.22 Require residential subdivisions to provide street connectivity to the maximum extent feasible by limiting the use of single access streets.
- C.23 Ensure that the street designs of new subdivisions support the delivery of emergency service.
- C.24 The use of long single-access streets, generally exceeding 20 residential dwelling units is discouraged and should be utilized only when topographical, geographical or other physical conditions make it infeasible to provide street connectivity.

ALTERNATIVE MODES OF TRANSPORTATION

A. Goal

A City which promotes, encourages, and accommodates a variety of transportation modes as alternatives to the automobile.

B. Objectives

- B.1 To provide infrastructure and facilities necessary to accommodate pedestrians, bicycles, and other non-automobile modes of transportation.
- B.2 To reduce the number and severity of vehicular, bicycle and pedestrian-related accidents.
- B.3 To prioritize future sidewalk construction.



C. Implementing Policies and Action Programs

- C.1 Encourage the construction of sidewalks along all public roadways with special emphasis given to collectors, arterials, and areas with high pedestrian traffic generators such as schools, commercial centers, transportation facilities, public buildings, beaches and parks.
- C.2 Encourage pedestrian circulation in commercial areas through the provision of convenient parking facilities, increased sidewalk widths, pedestrian-oriented building designs, landscaping, street lighting and street furniture.
- C.3 Design pedestrian spaces and circulation in relationship to land uses and available parking for all new construction and redevelopment projects.
- C.4 Link public sidewalks to the network of public and private trail systems.
- C.5 Provide for handicapped access to and along public sidewalks and along as much of the trail system as feasible.
- C.6 Install sidewalks and trail systems within existing and new industrial developments.
- C.7 Encourage school districts to implement safety programs for pedestrians and bicyclists within the public school system.
- C.8 Maintain a Traffic Safety Commission composed of Carlsbad citizens for the purpose of studying matters of traffic and pedestrian safety and making recommendations to the City Council regarding measures to promote and improve traffic and pedestrian safety.
- C.9 Employ improved traffic control devices and monitor police accident reports to increase pedestrian and bicyclist safety.
- C.10 Prepare and maintain an inventory of all missing and incomplete sidewalk segments within the City for the purpose of prioritizing future sidewalk construction.
- C.11 Coordinate the location of bicycle routes with the Parks and Recreation Element and

the Open Space and Conservation Element.

- C.12 Extend bicycle routes to cultural, educational and recreational facilities whenever practical.
- C.13 Develop and implement employer incentive programs to encourage the placement of strategic bicycle storage lockers, and the construction of safe and convenient bicycle facilities.
- C.14 Design bicycle routes in accordance with the "Bike Route Standards" Chapter 1000 of the State of California Highway Design Manual.
- C.15 Improve bicycle access to beach areas.
- C.16 Review, periodically, the Circulation Element Bicycle Route Map and revise, as necessary, to reflect existing roadway conditions and changed land uses.
- C.17 Coordinate with the San Diego Association of Governments (SANDAG) and the North County Transit District (NCTD) on the installation of any new trolley or light rail transit systems.
- C.18 Provide linkage to bus, pedestrian and bicycle routes from any new light rail commuter transit facility.
- C.19 Encourage passive and active use of the railroad right-of-way as trail linkage and bicycle pathway.
- C.20 Plan and coordinate park-and-ride facilities with CALTRANS, NCTD and SANDAG.
- C.21 Encourage commuter usage of buses, carpools and vanpools through a combination of employer incentives, public education programs and construction of safe, convenient and aesthetically pleasing transfer facilities.
- C.22 Encourage the expansion of bus service and new routes into developing or redeveloping areas of the City.
- C.23 Design public trails in accordance with the Open Space and Conservation Element



including multi-use and equestrian segments where appropriate.

- C.24 Review, periodically, the conceptual Open Space and Conservation Map, which is shown as Map 2 in the Open Space and Conservation Element and revise the trails system to reflect existing roadway conditions and land use changes.

AIR TRANSPORTATION

A. Goal

A City which balances the needs of the existing general aviation airport with the needs of the citizens of the city.

B. Objectives

- B.1 To encourage the continued operation of McClellan-Palomar Airport as a general aviation airport.
- B.2 To prohibit the expansion of McClellan-Palomar Airport unless approved by a majority vote of Carlsbad electorate as required by the Carlsbad Municipal Code Section 21.53.015.

C. Implementing Policy and Action Program

Coordinate with the San Diego Association of Governments and the Federal Aviation Administration to protect public health, safety and welfare by ensuring the orderly operation of the Airport and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around the airport.

PUBLIC UTILITY AND STORM DRAINAGE FACILITIES

A. Goals

- A.1 A City with a comprehensive network of utilities and storm drainage facilities which provide appropriate public utility and flood control services to all land uses.
- A.2 A City in which the public utility and storm drainage infrastructure are constructed

concurrent with or prior to the actual demand for such facilities.

B. Objectives

- B.1 To maintain a clear and consistent set of standards for the design and construction of public utilities.
- B.2 To implement and regularly update developer fee programs for the financing of public utility and storm drainage facilities.
- B.3 To enhance the economic value of property and improve the economic competitiveness of the City through the construction of well designed, efficient and cost effective public utility and storm drainage facilities.
- B.4 To maintain current master plans for the expansion of local public facilities for sewer, potable water, reclaimed water and storm drainage.
- B.5 To comply with all federal, state and local laws and regulations regarding the preservation and enhancement of water quality.

C. Implementing Policies and Action Programs

- C.1 Require new development to construct all public facilities needed to serve the proposed development prior to or concurrent with the circulation needs created by the development.
- C.2 Develop, and update periodically, a set of standards for the design and construction of public utilities.
- C.3 Coordinate the planning and construction of public utilities with existing public utilities in adjoining neighborhoods.
- C.4 Require new development to dedicate and improve all public rights-of-way for public utility and storm drainage facilities needed to serve development.
- C.5 Inform the public and contractors of the danger involved, and the necessary precautions that must be taken when working on or near, pipelines or utility transmission lines.



- C.6 Monitor the adequacy of public utilities as an integral part of the Growth Management Plan and Public Facilities Management System.
- C.7 Ensure developer conformance with all adopted public utility and storm drainage master plans and adopted ordinances regarding the provision of public utility and storm drainage facilities.
- C.8 Ensure continued coordination between the City and special utility districts and public utility companies operating in Carlsbad.
- C.9 Develop and implement a program of "Best Management Practices" for the elimination and reduction of pollutants which enter into and/or are transported within storm drainage facilities.
- C.10 Review and update, on a regular basis, master plans for the expansion of local public facilities for sewer, potable water, reclaimed water and storm drainage.

SCENIC ROADWAYS

A. Goal

A City which preserves and enhances the visual, environmental and historical characteristics of the local community through sensitive planning and design of transportation and utility corridors.

B. Objectives

- B.1 To enhance the scenic, environmental and historical quality of roadways in conjunction with the Circulation, Open Space and Conservation, and Parks and Recreation Elements of the General Plan.
- B.2 To establish a route map identifying existing and future scenic roadway, railroad and utility corridors within the City.
- B.3 To consider a system of routes and special treatments to increase the enjoyment of and opportunities for recreational and cultural pursuits and tourism in Carlsbad.
- B.4 To provide a process for the establishment of convenient and safe scenic routes to

major recreational areas and points of historic, scenic or cultural significance.

- B.5 To provide multiple recreational uses, such as bikeways, public trails, roadside rests and observation points, when appropriate, on lands within and adjacent to designated scenic corridors, and provide a means of coordinating scenic roadways with other transportation and recreational opportunities within the City.
- B.6 To provide a means of enhancing scenic roadways and making them identifiable to the traveling public.

C. Implementing Policies and Action Programs

- C.1 Implement the policies, standards and guidelines contained within the Carlsbad Scenic Corridor Guidelines.

- C.2 Establish four categories of scenic corridors and designate streets to be included within those categories as follows:

Community Theme Corridors – connect Carlsbad with adjacent municipalities and present the City of Carlsbad to persons entering and passing through the community. Community Theme Corridors include:

El Camino Real
Carlsbad Boulevard
Palomar Airport Road
La Costa Avenue
Melrose Drive

Community Scenic Corridors – interconnect major subareas of the present and planned Carlsbad community. Community Scenic Corridors include:

College Boulevard
Cannon Road
Carlsbad Village Drive
Faraday Avenue
Interstate 5
La Costa Avenue
Olivenhain Road/Rancho Santa Fe Road
Poinsettia Lane/Carrillo Way

Natural Open Space and Recreation Corridors – offer spectacular views of waterscapes, landforms, wildlife and the Pacific



Ocean. Natural Open Space and Recreation Corridors include:

Adams Street/Park Drive
Batiquitos Drive
Jefferson Street (portion adjacent to Buena Vista Lagoon)

Railroad Corridor – presents the City of Carlsbad to people passing through the City by rail. The only Railroad Corridor is:

Atchison Topeka & Santa Fe Railroad

- C.3 Review and update periodically the list of roadways designated as scenic corridors.
- C.4 Utilize and update the criteria for designating scenic roadways and selecting community identity entries outlined in the Carlsbad Scenic Corridor Guidelines Manual.
- C.5 Include roadways as scenic routes which provide significant views of the ocean, lagoons, open space lands, back country and urban activity.
- C.6 Enhance and preserve the natural and developed environments along each designated scenic route.
- C.7 Approve projects adjacent to El Camino Real only if the proposed project is consistent with the El Camino Real Corridor Development Standards.
- C.8 Coordinate the planning, design and implementation of designated scenic corridors with the Planning, Engineering, Parks and Recreation and Utilities and Maintenance Departments.
- C.9 Coordinate the scenic corridor program with the State, County and adjacent cities whenever possible.
- C.10 Review the need to establish additional special overlay zones along designated scenic corridors and initiate the appropriate rezoning if an overlay zone is warranted.
- C.11 Develop guidelines to improve the visual quality of the corridor adjacent to the Atchison Topeka and Santa Fe Railway.
- C.12 Seek financial assistance from federal and state sources whenever possible to assist

in the implementation of the scenic roadways program.

REGIONAL CIRCULATION CONSIDERATIONS

A. Goals

- A.1 A City with a modern public utility and transportation system based upon integrated programs for the management of air quality, water quality and land resources.
- A.2 A City with a transportation system which helps minimize air pollution and traffic congestion and supports commerce and economic development.
- A.3 A City which participates with other cities in the County, through the San Diego Association of Governments, in working toward the solution of regional transportation issues.

B. Objectives

- B.1 To develop programs and strategies for Transportation Demand Management consistent with the San Diego Regional Air Quality Strategy.
- B.2 To participate with other cities in the County in developing the Regional Growth Management Strategy which addresses air quality, transportation system management, and transportation demand management for San Diego County on a "regional community" basis.
- B.3 To comply with all federal, state and local laws and regulations regarding the preservation and enhancement of air quality.

C. Implementing Policies and Action Programs

- C.1 Implement the policies of the Regional Growth Management Strategy when the program is adopted by the City.
- C.2 Encourage the inclusion of onsite or nearby amenities such as day care facilities, dry cleaners and convenience stores within residential and industrial projects to reduce vehicular trips.



- C.3 Coordinate with CALTRANS as development proceeds and CALTRANS funds become available to ensure that the capacity of on/off ramps is adequate.
- C.4 Consider noise impacts in the design of road systems and give special consideration to those road corridors in scenic or noise sensitive areas.
- C.5 The City shall work with the adjacent communities and agencies of Oceanside, Vista, Encinitas, San Marcos, County of San Diego, Caltrans, North County Transit District, San Diego Association of Governments and other appropriate agencies to coordinate local traffic management reduction efforts.

risdictions to extend Leucadia Boulevard from Interstate 5 to El Camino Real.

- E. Melrose Drive - The City should support and encourage adjoining jurisdictions to extend Melrose Drive from the Carlsbad city limits south to an appropriate connection. Melrose shall maintain its classification as a prime arterial north of Rancho Santa Fe Road. South of Rancho Santa Fe Road, Melrose may be built to secondary or modified standards without an amendment to this element but should preserve adequate right-of-way to construct a full width major arterial road.

III. CIRCULATION PLAN NOTES

Several areas of the Circulation Plan require further explanation of the City's intent. As a result, the following notes are provided to clarify the plan.

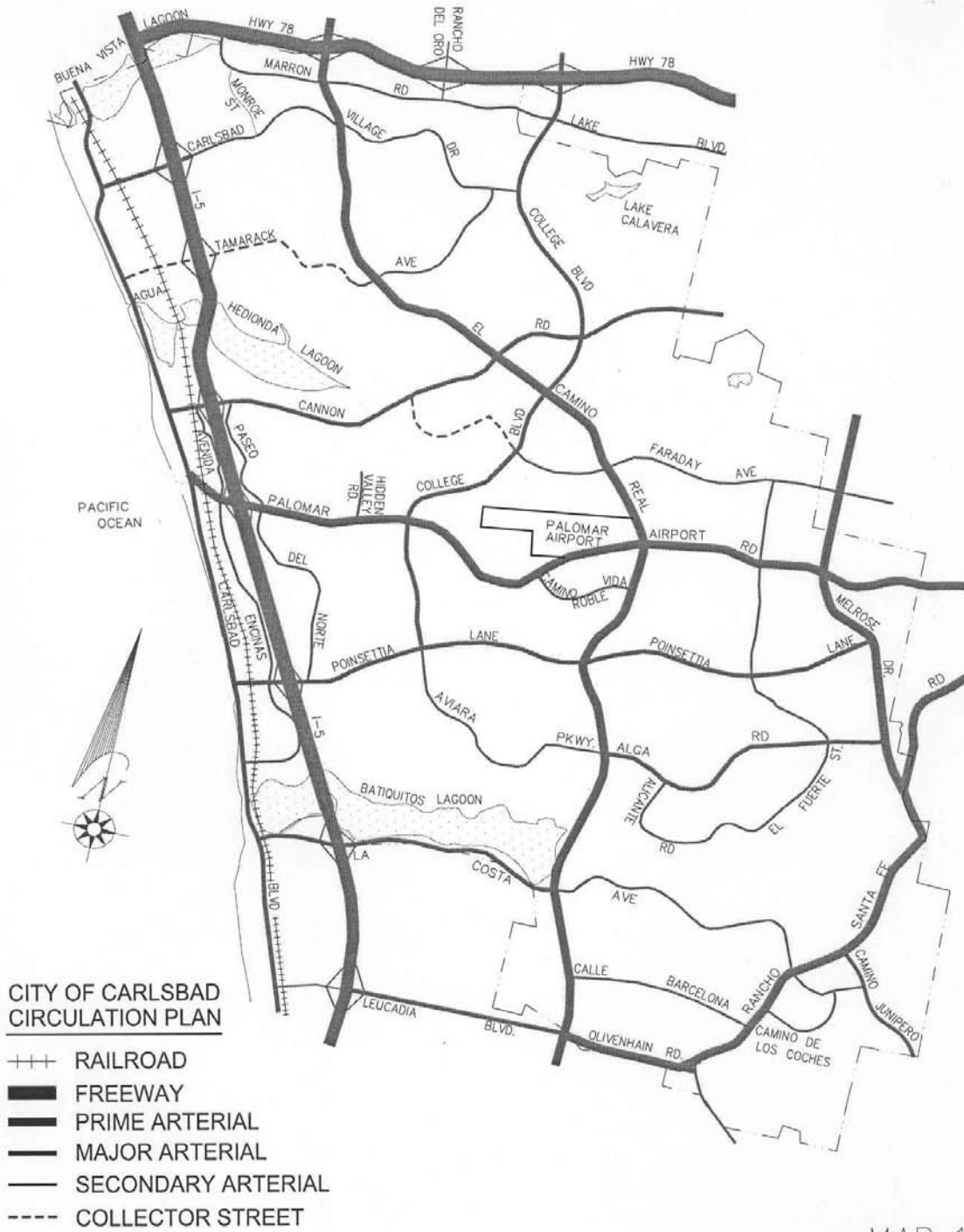
- A. Rancho Del Oro - Classified as a secondary arterial roadway only if a freeway interchange with SR78 is provided. If an interchange is not provided, this roadway is not to be included in the plan.
- B. Tamarack Avenue - Classified as a modified collector street between Carlsbad Boulevard and Skyline Road. An 80-foot right-of-way west of Jefferson to Carlsbad Boulevard should be maintained. Secondary arterial standards should be maintained between Jefferson Street and Adams Street.
- C. Avenida Encinas - The City might downgrade the southernmost link of this roadway (between Lakeshore Gardens Mobile Home Park and Carlsbad Boulevard) to a collector street if a master plan for the immediate area indicates low intensity development. Such downgrading should not require an amendment to this element.
- D. Leucadia Boulevard Extension - The City should support and encourage adjoining ju-



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CIRCULATION PLAN



Amended 05/20/2003



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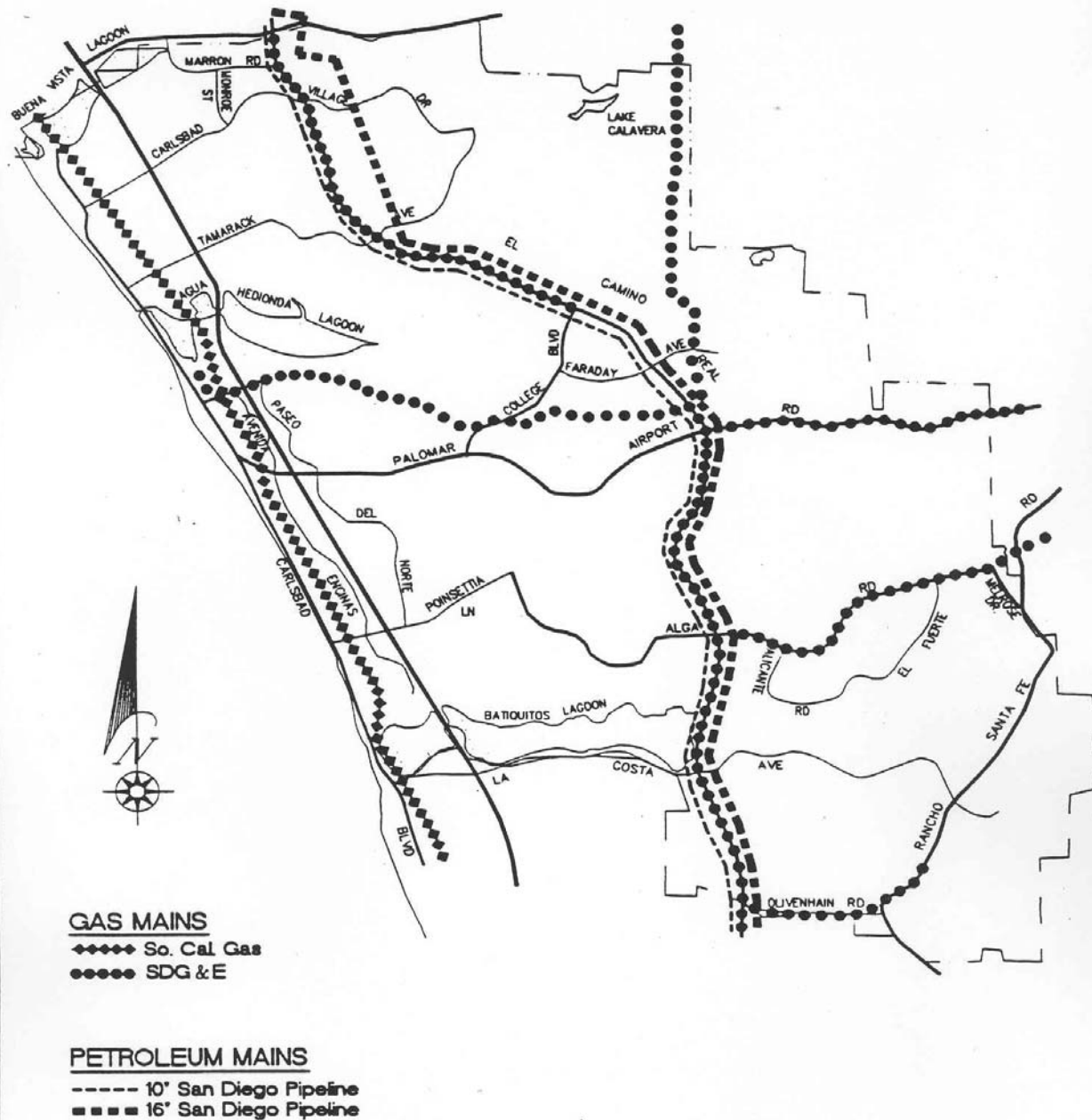




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HIGH PRESSURE GAS & PETROLEUM MAINS



MAP 3

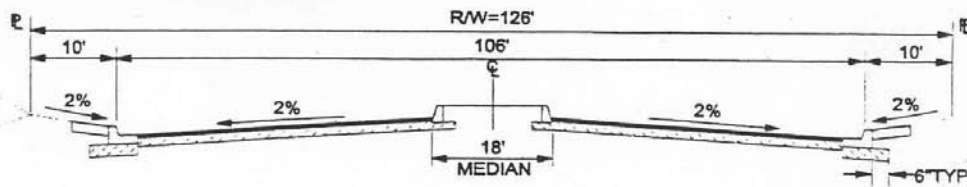


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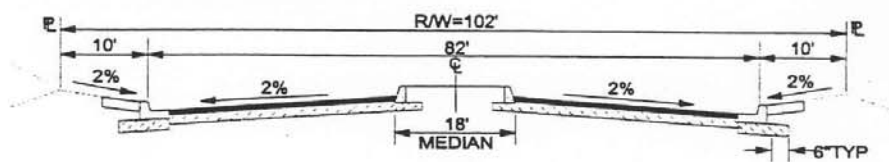


STREET DESIGN STANDARDS

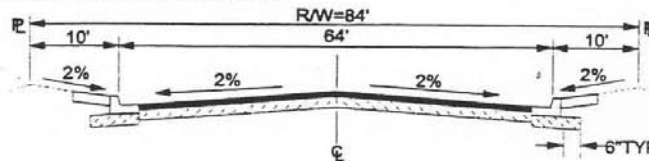
PRIME ARTERIAL STREET



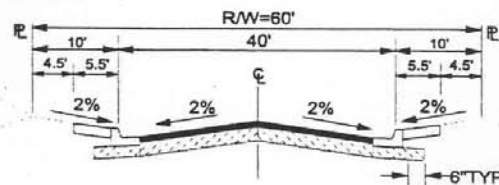
MAJOR ARTERIAL STREET



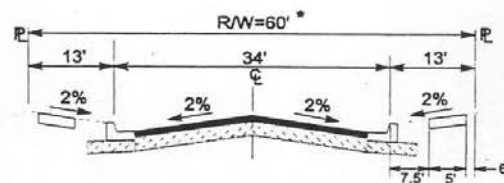
SECONDARY ARTERIAL STREET



COLLECTOR STREET



LOCAL STREET



* FOR CUL-DE-SACS R/W REDUCED TO 56' AND CURB-TO-CURB WIDTH TO 36'

These illustrations represent typical cross sections of the streets described in the Circulation Element. They are not intended to represent absolute standards

KEY

R/W = RIGHT OF WAY
C = CENTERLINE
P = PROPERTY LINE

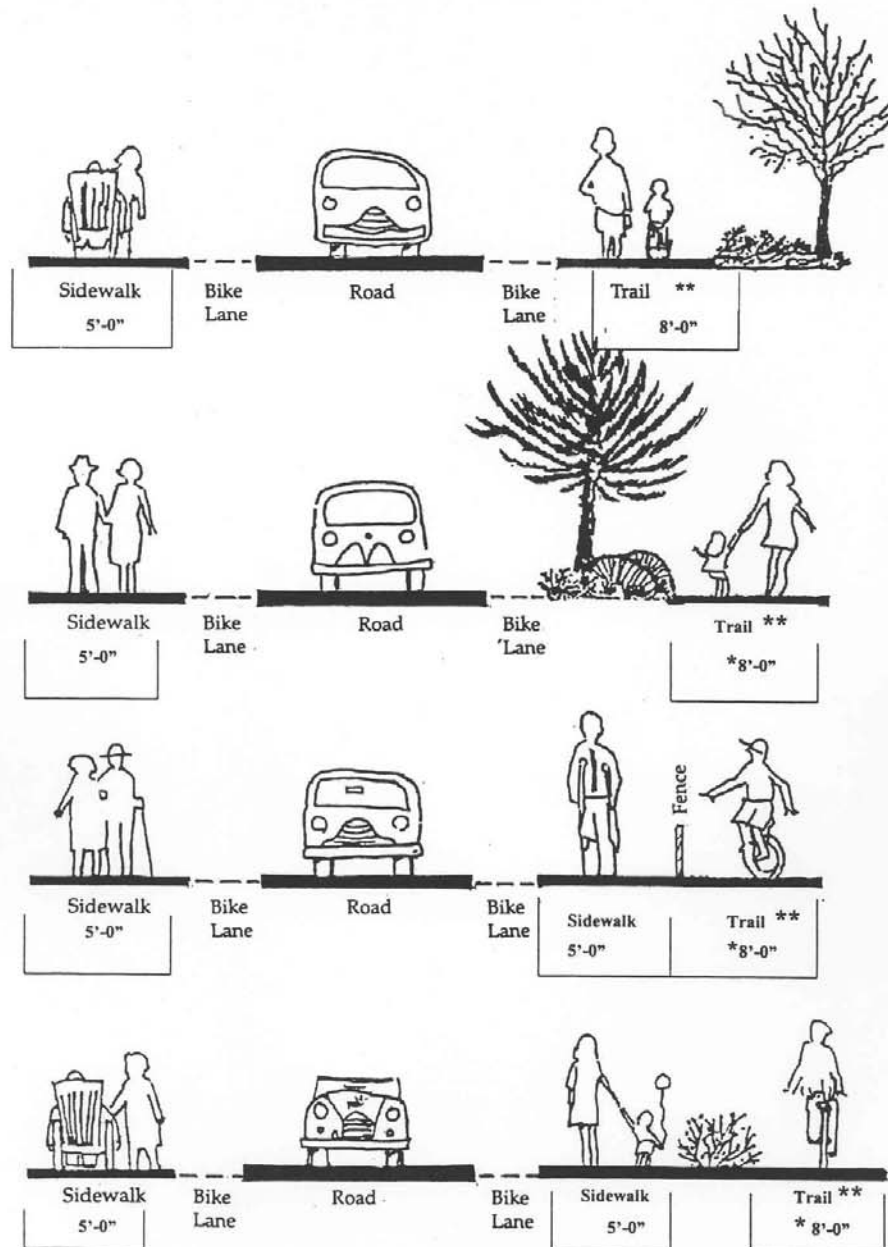
FIGURE 1



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Alternative Concepts For Circulation Element Trails



4/10/01

*5 ft. under certain circumstances

**Trail can be paved or unpaved

FIGURE 2



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VI. GLOSSARY

ARTERIAL

An arterial street provides for the movement of large amounts of traffic. It carries traffic from collector streets to other collectors, arterials or freeways.

AVERAGE DAILY TRIPS (ADT)

Average Daily Traffic (ADT) is an average 24-hour traffic volume at a given location for some period of time less than a year. While an AADT is for a full year, an ADT may be measured for six months, a season, a month, a week, or as little as two days. An ADT is a valid number only for the period over which it was measured.

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

The state agency in charge of transportation planning, construction and maintenance of the state's highway system.

CALTRANS

See California Department of Transportation.

CAPITAL IMPROVEMENT PROGRAM (Plan) (CIP)

A city's governmental budget that programs public facilities to fit its fiscal capability some years into the future. Capital improvement programs are usually projected five years in advance and should be updated annually, so as to provide a link to the annual budgeting process.

CIP

See Capital Improvement Program

DESIGNATED SCENIC CORRIDOR

A roadway that has been subjected to all of the steps contained in the Scenic Roadway Element to qualify as a scenic corridor which is found to possess scenic or historical amenities worthy of preservation, and which is implemented by the adoption of a Specific Plan and overlay zoning.

GENERAL AVIATION AIRPORT

An airport classified by the Federal Aviation Administration (FAA) as a general utility facility serving mainly aircraft with a maximum gross takeoff weight of 12,500 pounds or less, light propeller-driven, turboprop, and business jet general aviation aircraft.

RIGHT-OF-WAY

The area of land which has been dedicated for public use for transportation purposes (i.e., a street, freeway or railroad).

ROADWAY

A strip of land which is covered by a street, public thoroughfare or freeway used for vehicular transportation.

SANDAG

See San Diego Association of Governments.

**SAN DIEGO ASSOCIATION OF
GOVERNMENTS (SANDAG)****SCENIC CORRIDOR**

The regional planning agency for the San Diego Region of which Carlsbad is a member agency.

The bands of land generally adjacent to the scenic roadway right-of-way that complete the visual appearance and integrity of the total composition of the scenic roadway. The boundaries of the scenic corridor may coincide with the boundaries of the visual corridor but are usually less. The following list includes future routes, as designated on the adopted Circulation Element of the General Plan, that the staff feels, when constructed, may qualify to be added to the "Master List." When considering future improvement plans for these routes, the City should consider the potential scenic and historic amenities along these routes:

1. Cannon Road - from Interstate 5 to El Camino Real.
2. Batiquitos Drive - from Poinsettia Lane to El Camino Real.
3. Melrose Drive - along the right-of-way throughout the City of Carlsbad.
4. Poinsettia Lane/Alga Road - from Carlsbad Boulevard to future alignment of Melrose Drive.
5. Park Drive - from intersection with Kelly Drive to its terminus.

**TRANSPORTATION DEMAND
MANAGEMENT (TDM)**

A comprehensive set of strategies designed to influence travel behavior with respect to mode, time, frequency, route, or distance in order to improve the efficiency and effectiveness of roads, highways, and public transit services. Principal strategy measures involve, but are not limited to, ridesharing and alternative work hours.

**TRANSPORTATION SYSTEM
MANAGEMENT (TSM)**

A process that addresses ways to improve overall transportation system performance through a variety of low-cost management actions which foster more efficient use of existing transportation systems. TSM is an umbrella term for parking management and traffic management, and transit management.